

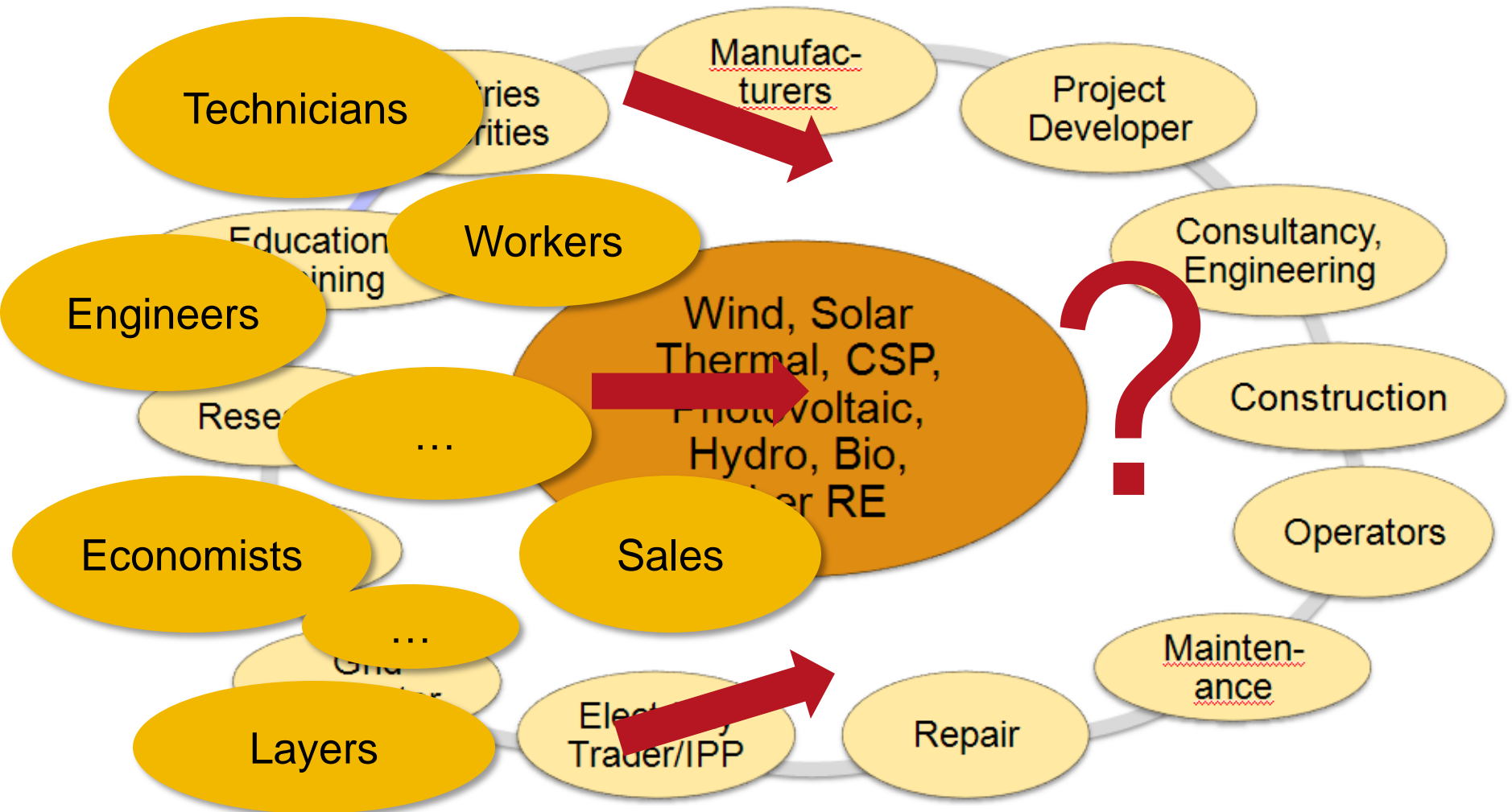
Innovative formats for further education in the sector of Renewable Energy



MENAREG5, 15 – 16 May 2012, Marrakech, Morocco
**Workshop 3: “Renewable Energies: Training, R&D and innovation:
How to allow for technology acquisition in the MENA region?”**
Albrecht Tiedemann, Renewables Academy (RENAC) AG



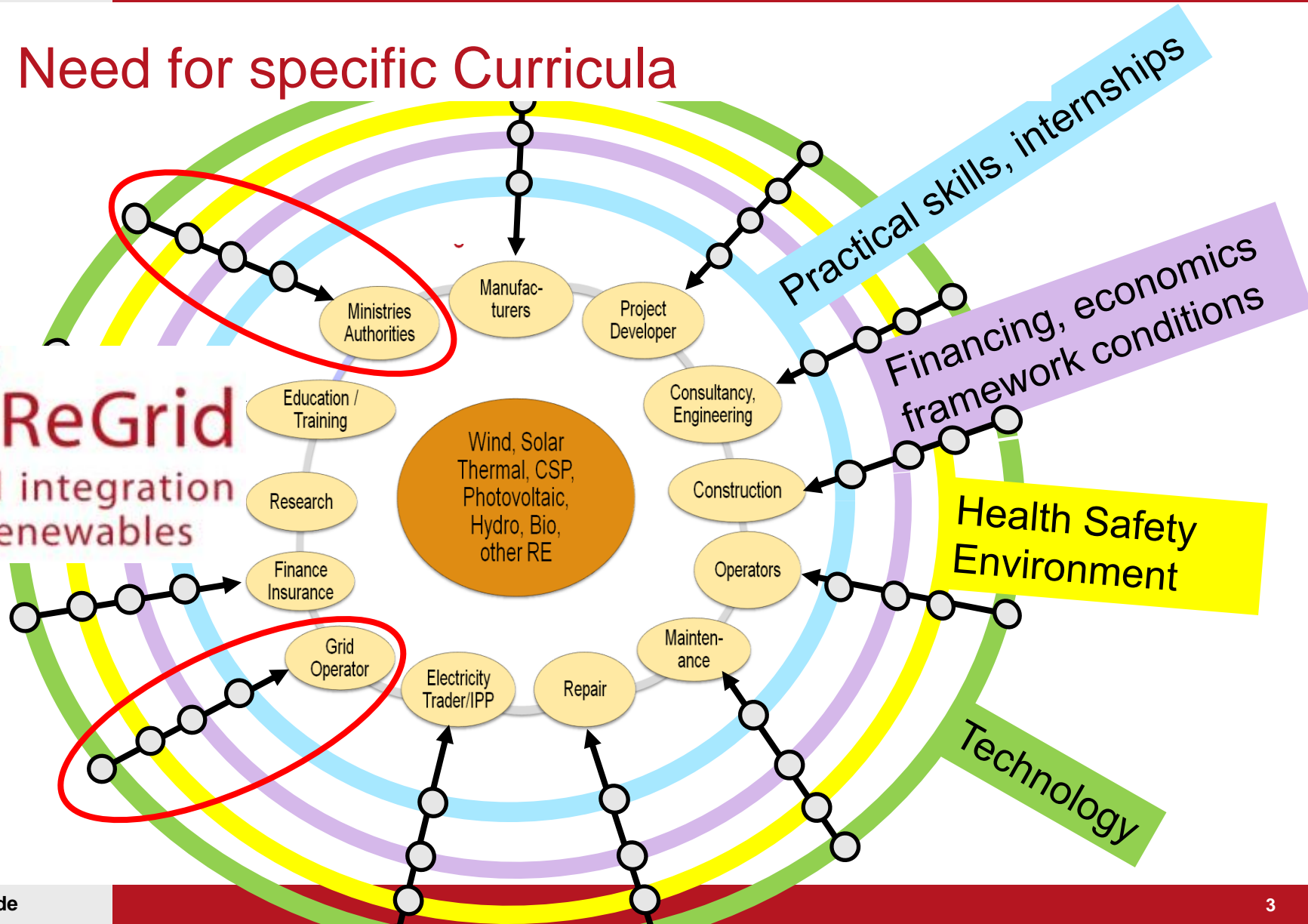
How to train Staff for the Renewable Value Chain?





Need for specific Curricula

ReGrid
grid integration
of renewables





Case ReGrid: Questions from the Grid Operators' Point of View

- ↖ Will the energy supply system be safe even with high amounts of wind and solar?
- ↖ Can wind and solar cover the rising energy demand?
- ↖ How much RE-power is available during time of peak load?
- ↖ Can grid operators balance power systems with a high share of RE?
- ↖ What are the costs of grid integration?

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ReGrid-Program (Integration of Large Amounts of Renewable Energy in the Electricity Grids)

- ↯ **Target groups:** Professionals from the energy sector of Algeria, Egypt, Lebanon, Jordan, Morocco, Libya and Tunisia
- ↯ **Subjects:**
 - ↯ Provide know-how to find country-specific solutions for grid integration of: wind energy, grid connected photovoltaic and concentrating solar power (CSP)
 - ↯ Specific topics on grid integration to enable very high percentage of renewables (> 50%) under a long term perspective
- ↯ **Language:** English, French and Arabic
- ↯ **Location:** internet-seminars and seminars in Berlin
- ↯ **Duration:** 3 month online, 2 week seminars in Berlin
- ↯ **Application:** www.renac.de/en/projects/regrid

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ReGrid Seminar Plan

	2011	2012	2013
Online Webinars			
Seminars in Berlin			
Mobile Exhibition			
Final Workshop			



ReGrid Summary

⌞ Challenges

- ⌞ Need for suitable grid operation and system planning tools due to fluctuation of wind and solar power generation

⌞ What has to be done?

- ⌞ Training for professionals responsible for grid operation
 - ⌞ methodology and tools
 - ⌞ grid simulator
- ⌞ Training for professionals responsible for power system planning
- ⌞ Curricula development for professionals with
 - ⌞ engineering-technical tasks
 - ⌞ management tasks

⌞ Who should take action?

- ⌞ Energy sector (companies / grid operators)



Thank you



Source: Repower, 2010

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